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Operational Systems

Test and Evaluation NWSPD 30-3

FIELD TEST PROCESS

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Signed by November 22, 2004

John McNulty Date

Director, Office of Operational Systems

Field Test Process

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Appendices

1. Introduction. This instruction supports the National Weather Service (NWS) Policy Directive, 30-3, *Operational Systems, Test and Evaluation*. This instruction establishes the process the Office of Operational Systems (OPS), Field Systems Operations Center (FSOC), Test and Evaluation Branch (OPS24) follows for the development, conduct and reporting of tests conducted at NWS operational sites specifically related to an Operational Acceptance Test (OAT).

1.1 Definitions. The following sections are definitions for NWS operational field tests.

1.1.1 Operational Test and Evaluation (OT&E). A test specifically defined in the NWS Policy Directive (NWSPD 80-2) and Instructions for Commissioning (NWSI 80-201) new systems into NWS service operations. System commissioning is the process of applying technical and administrative judgments quantitatively and qualitatively to determine when a major system at an NWS site can be officially used in the conduct of NWS operations, and to evaluate the effectiveness of system support functions. The purpose of an OT&E is to validate that the commissioning criteria can be met when a new system is placed into NWS service operations at a site. The term, OT&E, is restricted terminology in the commissioning process. OPS24 is responsible for the planning, conduct and reporting of NWS commissioning OT&Es.

1.1.2 OAT. An OAT is a formal evaluation of a modification to or replacement of an NWS major operational system (see Section 2.1, Major Systems) in an NWS field operations environment. Specifically, an OAT validates the installation, system performance and communication reliability and availability, as well as the logistics and maintenance support needed for the life cycle management. A successful OAT is a prerequisite for national deployment of the system modification or replacement. The OAT is performed after a successful system integration test by the developer and a successful System Test (ST) by OPS24 in a simulated operational environment. OPS24 is responsible for the planning, conduct, and reporting of the OAT.

1.1.3 Beta Test. A Beta Test is an informal evaluation of a system component (e.g., new software release) involving operational field sites. The test does not usually include a formal test evaluation pass/fail criteria or a formal test plan. However, there is a set of defined test

objectives established to accomplish such as validation of installation instructions and documentation of problems that might occur during the use of the test product in field operations. The Beta test may also be used as a diagnostic method to help the software developers capture real-time data to resolve known problems that are difficult to replicate in a simulated operational environment.

1.1.4 Operational Readiness Demonstration. This test is used by the NWS Headquarters Office of Climate, Water, and Weather Services (OCWWS) to evaluate service product changes within the user community (Partners) and by the NWS field forecasters as a result of changes to product generation software applications in major NWS operational systems. OPS has authority and responsibilities for evaluation of system operations and OCWWS has authority and responsibilities for evaluation of service operations.

2. Scope. An OAT is performed for all hardware and OPS-developed software modifications to or replacement of major NWS operational systems (i.e., Planned Product Improvement).

2.1 Major Systems. Major NWS systems are used for the collection, processing, dissemination, or distribution of Weather/Climate/Hydrologic data and service under the management of the Director, OPS. (It may also be applied to related systems procured and operated/maintained by NWS for other Federal agencies.) Nominally, OPS24 performs field tests for:

- Advanced Weather Interactive Processing System (AWIPS) Planned Product Improvements for hardware upgrades.
- Surface Observing Systems. The Automated Surface Observing System (ASOS) Planned Product Improvements and software enhancements.
- Upper Air Observing System. The Radiosonde Replacement System for the current operational MicroART system.
- NOAA Weather Radio (NWR). The NWR Console Replacement System (CRS)/Voice Improvement Processor and transmitters.
- Miscellaneous. As assigned by the Director, OPS.

2.2 Systems Excluded. Specific systems excluded from this instruction are those observing, processing, and dissemination systems including:

- AWIPS - Excludes *software* modifications and improvements to the AWIPS. The Office of Science and Technology is the responsible authority. A Responsibility Transfer Plan must be coordinated with and approved in conjunction with OPS, before OPS24 assumes OAT responsibility for baseline software changes.
- Weather Surveillance Radar (WSR)-1988 Doppler - The OPS Radar Operations

Center (ROC) is responsible for system tests related to modifications to or replacement of the network of NWS and Department of Defense Next Generation Doppler Radars.

- Ocean Data Buoy Sensors - The OPS National Data Buoy Center (NDBC) is responsible for system tests related to modifications to or replacement to the network of ocean data buoy sensors under NDBC's management.

3. Roles and Responsibilities. Authorization for OPS24 to undertake a system test for the major systems identified in section 2.1 is through the Configuration Management process. The following sections document the major authorities for managing the system test.

3.1 Program Management Committee. The Program Management Committee (PMC) is comprised of the NWS Office and Regional Directors and representatives from other agencies who have a vested interest in a given program. The PMC is the final authority to authorize national deployment for any system or system component and will formulate its decision based on the recommendation of the Test Review Group (TRG).

3.2 Configuration Control Board (CCB). The system program manager for a major system is the chair of a CCB. The CCB approves changes to the system and through approval of a Request for Change will stipulate successful system and field tests as a condition for national deployment of the change. The Chair, CCB, presents the TRG recommendation to the Program Management Committee as input to their deployment decision.

3.3 OAT Director. The OPS24 OAT Group Leader or designee is the OAT Director for all OATs. The OAT Director manages the development and coordination of the test plan, the conduct of the test, chairs the TRG (see Section 3.3), and manages the development and coordination of the test report documenting the test results, conclusion and recommendation. The OAT Director organizes and manages the formal Test Team (see Section 3.5). The OAT Director reports to the CCB through the system program manager.

3.4 TRG. The TRG for an OAT is established as an independent body to oversee the test and reports to the CCB. The TRG consists of technical and service operations experts within NWS National and regional headquarters and a representative from the NWS Employee Organization (NWSEO). The OAT Director serves as a non-voting chair of the TRG. The OAT Director is the Chief, OPS24, or designee. The NWSEO representative and each national and regional headquarters office representative will have one vote. The TRG reviews all test results, prioritizes deficiencies found during the test, and recommends whether to proceed to national deployment at the conclusion of the OAT. The TRG is authorized to suspend and resume the OAT. TRG decisions are based on a consensus vote. A TRG recommendation whether to proceed to deployment is briefed by the Chair, CCB, to the PMC as input for their decision. If a TRG consensus cannot be reached, the issue will be raised to the CCB for resolution. If the CCB cannot resolve the issue, then, the PMC will decide.

3.5 Test Team. The Test Team is comprised of personnel from the OPS24 OAT Group with support from designated personnel in the OPS24 ST Group who are responsible for the field test

once a successful ST is achieved. The Test Team members from OPS24 OAT Group will develop the test plan and specific test case procedures, document and track deficiencies, coordinate and document minutes of TRG meetings, ensure appropriate technical experts analyze the test results, and develop the test report. The OPS24 OAT Group may solicit support from other organizations within NWS National Headquarters including National Centers for Environmental Prediction (NCEP), regional headquarters, field sites, and a representative from the NWSEO, as required, to serve on the Test Team. The Test Team may be required to travel to the OAT sites to witness the installation and monitor test activities of the OAT site during the first week of the OAT.

3.6 National Headquarters Test Support. The NWS National Headquarters organizations responsible for the software and hardware system changes provide the OAT Director at the commencement of the OAT (see Section 4.1) with all requisite field modification kits (FMK) and/or software with installation procedures. The appropriate operations support and maintenance organizations respectively provide the draft operations user and hardware maintenance documentation. The amount of procedural changes varies according to the degree of changes to the system under test.

3.7 NCEP Test Support. The OAT Director will solicit the NCEP Test Support when it is necessary to validate system changes affecting NCEP communication systems and data processes.

3.8 Regional Headquarters Test Support. The NWS regional headquarters system operations personnel and, if required, meteorological and hydrologic services division personnel coordinate with any field office support required during the OAT.

3.9 Field Office Test Support. The OAT Director relies on OCWWS and the appropriate Operations Support office to coordinate with the NWS regional headquarters on the selection of OAT sites.

3.10 NWSEO Test Support. Since system changes might affect working conditions at NWS operational field sites, NWSEO representation is important during the OAT to provide a perspective on any negative aspects of the changes.

4. OAT Process. The following sections describe the OAT process including test commencement, conduct and test conclusion. This is the process the OAT Director follows for every test the CCB authorizes.

4.1 Test Commencement. The OAT begins with the OAT Director convening the TRG and conducting a Test Readiness Review. The prerequisites for beginning the test and the conduct of the Test Readiness Review are as follows:

4.1.1 Prerequisites. Requirements for draft documentation and system hardware/software maturity to proceed with system test are as follows:

a. A successful ST - The ST Director briefs the OAT Director and TRG on the ST

results including problems found, fixes, and the system stability. Any problems resolved by "workaround" are noted and incorporated in the draft release notes. No critical problems are left unresolved during the ST. The system must be stable (i.e., ability of the system to stay in operational mode).

b. Hardware and software certification - The system engineers and software developers must certify all hardware, software, and firmware delivered for the OAT are the latest revision level after all fixes are incorporated after the ST and all hardware are Limited Production units.

c. Initial Issue FMK available at the National Logistics Support Center (NLSC), Kansas City, MO for the OAT Sites - An initial issue FMK is required at NLSC for ordering at the beginning of the OAT. If this cannot be setup ahead of time, the System Program Manager will ensure the FMK and draft installation procedures are delivered to the OAT sites.

d. Draft system documents - Documentation includes affected updates to the NWS engineering handbooks, user/operator manuals, system administration manuals, maintenance manuals, release notes, and installation instructions.

e. Training - Appropriate operations and maintenance training will be provided for all site personnel participating in the OAT.

f. OAT documents - Documentation includes the final version of the OAT plan with associated test case procedures (see Sections 4.2.3 and 6.1).

4.1.2 Test Readiness Review. The Test Readiness Review meeting convenes the developers, hardware, software, and logistics experts, documentation authors, and the ST Director to review all the prerequisites for commencing the OAT. The OAT Director provides a checklist of items required (see Appendix A). Each expert presents the status of their material. Once the materials are collected and discussed, the OAT Director gets a consensus decision from the TRG to start the OAT.

4.2 Test Conduct. The OAT Plan with test case procedures is coordinated for signature of the OPS24 Branch Chief in advance of the Test Readiness Review meeting. OPS24 distributes the OAT Plan to the test support personnel and the TRG at least two weeks before the start of the test. The test is conducted as outlined in the test plan (see Section 6.1) and begins with the OAT Test Team witnessing the system hardware and/or software installation using the draft engineering installation field kit and/or accompanying installation procedures. Once the site personnel have successfully performed the required installations, they then perform any specific test procedures accompanying the OAT plan. When a Test Team is dispatched to an OAT site, the Test Team provides a status report to the OAT Director and TRG before they depart.

All tests defined for OAT must be completed; deficiencies must be documented on a Test Trouble Report (TTR) form (see Section 4.2.6), presented to the TRG on a weekly basis for priority ranking and tracked for record keeping; and results reported to the TRG. Specific tests

include verification of system back up and/or service backup operations. Once the specific test procedures are completed, the OAT site performs their normal service operations using the system under test for the remainder of the OAT. The OAT should run a minimum of 30 days to ensure system stability and performance requirements are met. At anytime during the OAT, the Meteorologist-in-Charge or Hydrologist-in Charge can suspend the OAT if service operations are negatively affected by the system under test. The OAT site focal point notifies the OAT Director of the test suspension as soon as practical.

If communication networks are affected by the change, the OAT will include monitoring and reporting on the product availability and reliability. The OAT Director will use the Product Availability and Monitoring System (PAMS) to collect, analyze, and report on these statistics during the OAT.

The OAT sites focal points will participate in the weekly TRG meetings to present a summary status of the OAT. At the test conclusion, a final TRG meeting will be convened and the OAT site focal points will provide their recommendation on whether the OAT was successful at their site. The OAT Director will then solicit an overall recommendation from the TRG whether to proceed with national deployment of the change under test. The OAT Director will forward the TRG recommendation to the System Program Manger. All test results and recommendations will be documented in an OAT report.

4.2.1 Purpose and Objectives. The purpose of the OAT is to verify in real-time NWS operations that the system under test functions according to specifications and is reliable prior to national deployment at operational sites. Also, the OAT validates that all associated logistics and documentation required to operate and maintain the system is available. Specific test objectives will be stated in the test plan and will be used to measure the readiness of the system to start a formal field test.

4.2.2 Evaluation Criteria. Evaluation criteria for the test objectives are developed by OPS24 test personnel in coordination with the technical experts from NWS Headquarters as appropriate. The criteria are based on the system functions specifications and requirements documents to meet service operations performance requirements. All draft documentation are evaluated on how useable they are to perform operator and maintenance tasks.

4.2.3 Test Case Procedures. Test Cases or scenarios are formulated by the Test Team to correspond with each function of the system under test. There are three categories of test scenarios: 1) System, 2) Communication, and 3) Operations. In an OAT, procedures are only used to test critical functions seldom used in field operations, such as back-up scenarios. Test procedures are written as a step-by-step methodical instruction the tester follows to verify the outcomes of performing a function work according to the functional specifications (see Appendix D). The test procedure contains a cover sheet with a description of the test scenario, the purpose, objectives, and success criteria. The procedure also includes a step-by-step instruction providing a path to accomplish the test scenario, the expected outcome is for each step, and "check-off" box to annotate if the step completed achieves the expected outcome. A comment column allows the tester to add notes as the procedure is completed. Whenever a test is conducted, the test case procedures are evaluated by the tester to determine how effective they

are in obtaining the desired outcome. The procedures may be annotated for future improvements as a result of actual use in a test.

4.2.4 Surveys and Questionnaires. The OAT Plan contains user surveys and questionnaires, as appropriate, to solicit opinions and comments on the system under test from the field forecasters, electronic technicians, and NWS partners as appropriate. This type of feedback is used by the TRG in the determination of whether the system is ready for national deployment and provides input into problem areas noted by the user.

4.2.5 Methodology. The strategy for how the OAT is performed is documented in the Operational Acceptance Test Plan (see Section 6.1). This methodology ensures all new functions are validated in both normal and service backup operations using normal and backup system configurations. Average system performance availability and reliability is evaluated and compared to statistics of the system before installation. The comparison covers the same number of days and the new statistics must be at least equal to or better than the previous statistics. During this test, draft installation instructions, operator and maintenance documentation are used and evaluated in the performance of system operations and maintenance.

4.2.6 Reporting. All deficiencies are documented on a TTR form (see Appendix E) and supporting data collected for developers to analyze. Weekly TRG meetings will be convened to present and classify the deficiencies. Minutes of each meeting will be generated within 24 hours of the meeting. All TTRs will be classified as follows:

- *Critical* - A repeatable problem prevents the operator from performing service operations using the system. No work around exists.

  ACTION: The TRG recommends suspension of the test to the System Program Manager. If suspended, the test resumes when the System Program Manger approves a proposed corrective action. When the corrective action is complete, regression tests might be authorized by the TRG.

- *Urgent* - A repeatable problem prevents the operator from performing service operations using the system, but an acceptable workaround exists until the problem can be corrected.

  ACTION: The system test continues with the approved workaround until a permanent fix is available. If a fix becomes available, the System Program Manager approves the fix for implementation. The TRG may authorize retest of areas affected by the problem.

- *Routine* - A repeatable minor problem does not prevent the operator from performing service operations using the system.

  ACTION: The system test continues. An approved workaround may be authorized until the problem is fixed, but, it is not mandatory. Routine deficiencies are documented and prioritized by the proper authority for future fixes.

- *Watch Items* - A random or one-time (non-repeatable) problem with potential effect on using the system to perform service operations.

ACTION: The TRG monitors test activities for recurrence of the problem. If the problem occurs again, the problem is documented by the Test Team and the TRG re-categorizes the problem.

- *Potential Enhancement* - The problem is identified by the TRG as a new requirement.

ACTION: The TRG forwards the deficiency to the appropriate OCWWS representative for submission of the new requirement through the CM process for operational systems as a Request for Change.

4.3 Test Conclusion. At the end of the OAT, all remaining TTRs are adjudicated by the TRG. The OAT Director presents a summary of whether the test objectives were met based on the test pass/fail criteria documented in the Operational Acceptance Test Plan. All test objectives in the test plan must be satisfactorily met and no critical deficiency exists. Deficiencies may exist at the conclusion of the OAT, but a suitable workaround must be authorized by the TRG to proceed to national deployment. Also, all draft documentation (e.g., installation, operations, system administration, support and maintenance) provided must have been reviewed and deemed by the TRG as acceptable for use in field operations. If the TRG agrees with the results presented, the OAT Director recommends whether to commence national deployment to the CCB or the CCB's designated authority such as a working group. The chair of the CCB presents the TRG recommendation to the PMC for deployment approval. A Test Report documents all test results, conclusions, and recommendations (see Section 6.2).

5. Tools. Specific test tools should be implemented to manage the test projects (e.g., PAMS). The test organization responsible for all OATs will obtain the proper and most efficient tools to ensure the best means to store documents, analyze test data, and disseminate test information.

5.1 Test Archive. To meet Government standards for archival of official documents, all documents related to a specific test will be archived for the length of time established by the agency. Both hard and soft copies of the documents will be kept. A mechanism will be established to store test materials for legal record keeping and reference. Both hard and soft copies will be archived of all test plans, test case procedures, data results and analyses, TRG minutes, and reports along with other supporting records of the test.

5.1.1 Hard Copy. A technical reference library will be established to store any hard copy of official test documents and relevant test data and correspondence.

5.1.2 Soft Copy. A shared disk drive server will be established to store all soft copy of official test documents and relevant test data and correspondence.

5.2 Deficiency Status Tracking and Archive. A test tool will be used to create, update, provide status updates, and archive deficiency reports documented during the test.

5.3 Data Analyses. If applicable, a tool should be implemented to automatically collect, collate, statistically analyze and provide a report of the statistics for data products throughput on communication networks (e.g., PAMS).

5.4 Dissemination. A tool will be implemented to disseminate all test-related information in an efficient and timely manner. Preferred dissemination tools will include electronic mail (e-mail) and the use of Web pages to post test documents for ease of access. The following sections provide specific examples of applicable test tools.

6. Documentation. Two major documents are required for each OAT: 1) An Operational Acceptance Test Plan; and 2) an Operational Acceptance Test Report. These documents serve as the official records of each test conducted.

6.1 Operational Acceptance Test Plan. The test plan will include an introduction and background, a purpose and test objectives, the evaluation criteria for each test objective, test system configurations, test materials, test methodology, deficiency adjudication, test focal points and contact information. The test plan will include as appendices all test case procedures, a TTR Form (see Appendix B, Test Plan Outline), and user surveys and/or questionnaires. The Operational Acceptance Test Plan will be signed by the Director, Field Systems Operations Center (FSOC). An initial draft will be created and distributed for review within the test organization. A revised draft will then be sent to technical experts within the National Headquarters comprising the TRG. Once their comments are incorporated, the document will be forwarded for signature.

6.2 Operational Acceptance Test Report. The Operational Acceptance Test Report will include a purpose, introduction, test objectives, a description of how the test was conducted, a summary of the tests results including a listing of all TTRs, the test conclusion, and recommendation. If needed, a section will be added to the report describing any follow-on OAT required as a result of problems found in the original OAT. The Operational Acceptance Test Report will be signed by the Director, FSOC. An initial draft will be created and distributed for review within the test organization. A revised draft will then be sent to technical experts within National Headquarters comprising the TRG. Once their comments are incorporated, the document will be forwarded for signature.

APPENDIX A – Test Readiness Review Checklist

- ☐ OAT Plan completed.
- ☐ The System Test successfully completed.
- ☐ All critical Deficiency Reports/Test Trouble Reports closed.
- ☐ All OAT site personnel trained.
- ☐ Request for Change for test approved.
- ☐ All draft documentation is available.
- ☐ All OAT site configurations are complete and verified.

APPENDIX B – Example - Operational Acceptance Test Plan Outline

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APPENDIX C – Example - Operational Acceptance Test Report Outline

APPENDIX D – Example - Test Case Procedure

PX1 to PX2 Failover

CONDUCTED BY: _____ **DATE/TIME:** _____ **ITERATION:** _____

Step No.	Test Step	Expected Results	Comments/ Observations	Pass Y/N
PX1 to PX2 failover test. Simulate a PX1 failure. ***Note: The installation must be completed and the NCF notified to resume site monitoring before beginning this procedure.***				
1	*From a Unix window on px2-<site> as root enter:* ***clustat*** *Repeat from a Unix window on px1-<site>.*	*The status of the PXs is displayed. Ensure both PXs are up, the power switch status is good, the heartbeat status is good and px1apps is owned by px1-<site> and px2apps is owned by px2-<site>.*		
2	*From a Unix window on px2-<site> as root enter:* ***cd /data/logs*** ***tail -f px1apps.log***	*The px1apps.log is opened and pending.*		
3	*From another Unix window on px2-<site> as root enter:* ***cd /data/logs*** ***tail -f start.ingest.px1.log***	*The start.ingest.px1.log is opened and pending.*		

Step No.	Test Step	Expected Results	Comments/ Observations	Pass Y/N
4	*Pull the LAN cable from the rear of the PX1 box to remove it from the LAN. (Port Gb1)* *— or —* *On px1 as root, shutdown px1:* ***shutdown -h now*** *After completion of the shutdown process, power off px1.*	*Red banner message appear on all workstations indicating preprocessor swap in progress. When the failover is successful, activity is displayed in the tail of the px1apps.log and the start.ingest.px1.log.* *Note: The processes for failover for a LAN failure is different from a failure in the PX server. Both scenarios should be tested.*		
5	*The failover process takes less than 5 (five) minutes.*		*Failover time* _____	
6	*The NCF detects the failover, and notifies the site.* *Continue with the test while waiting for NCF notification.*	*The NCF notifies the site of the failover.*	*NCF's response time:* _____	
7	*Upon completion of the failover, enter:* ***cluadmin – cluster status*** *or* ***clustat***	*Verification the px1apps* is now owned by px2-<site>. Verify the px1-<site> node is down.		
8	Enter: **ps -ef | grep fxa**	The fxa processes are listed.		
9	Use **Process List: Single Server** table to verify all system processes that normally run on px1 are now running on px2.	All system processes are on px2.		

Step No.	Test Step	Expected Results	Comments/ Observations	Pass Y/N
10	Maintain this failover configuration for a few minutes. Assess the system's performance while running solely on the px2.	No system instability or other problems while running on px2.		
Restore System to Normal Configuration				
11	Return the PX1 LAN cable back into the LAN (Port Gb1) or if a shutdown was performed, reboot PX1.	PX1 is reconnected to the LAN.		
12	Request the NCF to swap back to the dual PX configuration. Perform any restoration procedures needed for site-unique systems.	The NCF configures px1 back into the cluster. (See Section 5 in the AWIPS Linux Preprocessor Prototype Technical Notes for the commands to restore the system.)		
13	Note the time the NCF took to perform the failover process.		Failover time _____	
14	On px1-<site> enter: **cluadmin – cluster status**	The *px1apps* is now owned by px1-<site>.		
15	On px1 enter: **ps -ef | grep fxa**	The fxa processes are listed.		
16	Use **Process List: px1apps** table to ensure all processes for px1 are displayed.	Verification all fxa processes successfully moved over to px1-<site>.		
17	Use the crontab table and verify the crontabs are running.			

Step No.	Test Step	Expected Results	Comments/ Observations	Pass Y/N
18	End of test			

Witnessed: _____

Overall Outcome: [ ] Pass [ ] Suspend
Date: _____

APPENDIX E - Example -Test Trouble Report Form

TTR NO: ____

1. DATE/TIME: _____ ORIGINATOR: _____ ATTACHMENTS: ____pages

2. LOCATION (Site AWIPS ID): _____

3. AWIPS SOFTWARE RELEASE BUILD: _____

4. TITLE/SUMMARY:
_____

5. TEST ACTIVITY: ___IOT&E ___OT&E

6. VTEC PRODUCT GENERATED: (check one)
___ Real Product
___ Test Scenario Product [_____TEST PROCEDURE TITLE _____ STEP(S) NO.]

7. AWIPS PRODUCT ID. :_____ (3-letter Identifier)

8. VTEC PHENOMENON and SIGNIFICANCE CODE: ____ (pp.s)

9. VTEC EVENT TRACKING NUMBER (ETN): ____(####)

10. AWIPS PRODUCT GENERATION APPLICATION: (Check one)
___ WWA ___ WARNGEN ____ RIVERPRO

11. SUBSYSTEM/COMPONENT: __VTEC String* __Mass Media Header __Other (e.g., Headliner)

* VTEC Format: /k.aaa.cccc.pp.s.####.yymmddThhZ$_B$-yymmddThhnnZ$_E$
[circle appropriate group(s) affected] See attached VTEC Format Definitions.

12. REPEATABILITY: __Could Not Repeat __Didn't Try __One Time Occurrence __Sometimes __Always

13. CONTACTED I0T&E/OT&E POC? ____YES ___ NO

14. (OT&E ONLY) NCF CONTACTED? ___ YES (_____TROUBLE TICKET NO.) ___ NO (Why)

Appendix E: Example -Test Trouble Report Form (Continued)

15. DESCRIPTION, CAUSE OF PROBLEM: (attach support documentation)

AUTHORIZING SIGNATURE:_____ DATE: _____

TRG PRIORITY: ___Critical ___Urgent ___Routine ____ Watch Item ___Potential Enhancement

PROBLEM CERTIFIED AS RELATED TO: _____ CON OPS ____TRAINING____SOFTWARE

Appendix E: Example -Test Trouble Report Form (Continued)

VTEC Test Trouble Report Completion

1. Date/Time Discovered: Enter the month/day/year the problem occurred.

   Originator: Enter Name of person writing the TTR.

   Attachments: Enter the number of pages of supporting information attached to the TTR.

2. Location (Site AWIPS ID.): Enter the 3-letter AWIPS site identifier.

3. AWIPS Software Release Build: Enter the build number for the AWIPS software problem was found (e.g., B3.2).

4. Title/Summary: Enter a Title for the TTR or a short phrase which describes the problem (e.g., VTEC Event Tracking Number Problem).

5. Test Activity: Place a check mark or an "X" in the appropriate blank space indicating whether problem occurred in IOT&E or in OT&E.

6. VTEC Product Generated: Place a check mark or an "X" in the appropriate blank space indicating whether problem occurred in a real operational product or a simulated product. If the product was simulated, enter the test procedure number and the number of the step or steps in the procedure where problem occurred.

7. VTEC Product ID: Enter the 3-letter identifier of the affected product (e.g., SVR).

8. VTEC Phenomenon and Significance Code: Enter the 2-letter code for the weather type (e.g., FL = Flood) and the significance level (e.g., W = Warning) from the VTEC communication string.

9. VTEC Event Tracking Number (ETN): Enter the 4-number code (e.g., 0001) assigned to keep track of the event during its lifetime from the VTEC communication string.

10. AWIPS Product Generation Application: Place a check mark or an "X" next to the appropriate software application name.

11. Subsystem/Component: Place a check mark or an "X" next to the appropriate name that identifies where the problem occurs. If the problem is in the VTEC string, circle the appropriate code(s) in the VTEC communication code format presented on the form.

12. Repeatability: Place a check mark or an "X" in the blank space provided indicating the frequency the problem occurs.

Appendix E: Example -Test Trouble Report Form (Continued)

13. IOT&E/OT&E POC Contacted?: Place a check mark or an "X" in the blank next to the appropriate YES or NO.

14. (OT&E SITES ONLY) NCF Contacted?: Place a check mark or an "X in the blank next to appropriate YES or NO. If the answer is YES, then enter the Ticket Number given to you when you call the NCF. If the answer is NO, give a brief explanation why no call was made.

15. Description of, Cause of Problem: Provide a concise description of the problem encountered. Attach the supporting documentation.

Authorizing Signature and Date: The OCWWS service focal point in IOT&E and the OT&E Point of Contact (i.e., WCM) will sign and date the TTR here.

TRG Priority: The VTEC OT&E Test Review Group Chairperson or designee will place a check mark or an "X" in the blank to indicate the priority the TRG assigns the TTR.

Problem Certified as Related To: The VTEC OT&E Test Review Group Chairperson or designee will place a check mark or an "X" in the blank to indicate the appropriate area the TTR problem is assigned.

APPENDIX F - Example - PAMS Report